

Sample Lesson Plan – Middle School (Grades 5th to 8th)

Date 6/1/2009	Subject Earth Science Class (also for US: History of Science in America Class)
	Topic: Benjamin Franklin & Climate Change Exploring Connections Between the Past and the Present
Objective	Analyzing the major climate issues of today by combining the themes of scientific analysis, collaboration, and the usage of publishing via the internet.
Active Engagement	<p>This lesson uses an entertaining 8 minute video narrated by “Ben Franklin” himself. He describes the ocean temperature readings taken during various crossings of the Atlantic Ocean over 200 years ago and how this scientific information is now being used to help analyze the earth’s current climate issues. Reference is also made to contrasting various colonial era land readings by Jefferson, Madison, Pemberton, etc. to today.</p> <p>The video is sponsored by various international organizations that are keenly interested in promoting the understanding of climate changes around the world.</p>
Assignment	<p>Possible follow-up discussions/questions:</p> <ol style="list-style-type: none"> 1) Scientists/climatologists/GLOBE students - what is their respective role in helping to observe and analyze today’s important climate issues. 2) Collaboration – what is the importance of bringing together various scientists and other interested parties from all cultures around the world. 3) Publishing results - how can the internet and other technological tools be used to help bring together the various global efforts. <p>Older students can explore the theme of taking bits and pieces of information, turning that into knowledge, and using the results to help understand the changing land around us. For example, can identify other examples of historical observations that have been turned into knowledge that influence our lives today. Can also discuss the competing interests of scientific advancements vs. political or economic interests and how best to bridge those gaps. Advanced students can also investigate the importance of increasing the number of observations to produce credible knowledge sets. They can also explore how to simplify vast amounts of information through the usage of mapping software such as Google to show various marine and terrestrial historical and current relationships.</p> <p>Those with a segment on Ben Franklin in their studies can explore how the work ethic through his autobiography propelled him to turn idle time into useful pursuits. Can also investigate the impacts that he had in charting the gulf stream, its impacts on America’s quest for independence, and how he was able to take the deeper ocean temperature readings using the materials of his time.</p> <p>Other resources: www.globe.gov, www.oldweather.org, www.met-acre.org, www.ipcc.ch</p>
Materials Needed	Computer connected to the internet or DVD player along with projection capabilities. Downloadable video at: www.oldweather.org/examples/benjamin-franklin-1785